

THAT WHICH IS CLAIMED IS:

1. A telecommunications system comprising:
a telecommunications network device having a
radio interface and a layered protocol architecture for
allowing transfer of upper layer Protocol Data units
5 using a shared medium between a communications unit and
the telecommunications network device,

wherein said layered protocol architecture is
operative for coding and transferring Protocol Data
Units as a plurality of Radio Link Control data blocks
10 that each carry at least one Logical Link Control
Protocol Data Unit (LLC PDU) and a data block header
that includes a delimiter as a length indicator (LI),
wherein any last Logical Link Control Protocol Data
Unit of a Radio Link Control data block has no
15 delimiter and when a last Logical Link Control Protocol
Data Unit fills the balance of the Radio Link Control
data block, the length indicator is zero having no data
for a first length indicator in any next in sequence
Radio Link Control data block.

2. A telecommunications system according to
Claim 1, and further comprising at least one packet
data physical channel through which Protocol Data Units
are transferred, wherein said layered protocol
5 architecture further comprises a radio resource
sublayer for managing the at least one packet data
physical channels and managing Radio Link Control and
Medium Access Control on the packet data physical
channels.

3. A telecommunications system according to
Claim 1, wherein said data block header includes a
Final Block Indicator (FBI) field to indicate whether

the Radio Link Control data block is the last data
5 block of a Temporary Block Flow.

4. A telecommunications system according to Claim 3, wherein said Radio Link Control data block further comprises a downlink Radio Link Control data block.

5. A telecommunications system according to Claim 1, wherein data block header includes an extension bit (E) field to indicate the presence of an optional octet in the data block header.

6. A telecommunications system according to Claim 1, wherein said data block header includes a More bit (M) field to indicate when another Logical Link Control Protocol Data Unit follows the current one
5 within a Radio Link Control data block.

7. A telecommunications system according to Claim 1, wherein a communications unit further comprises at least one mobile unit.

8. A telecommunications system according to Claim 1, wherein said telecommunications network device further comprises base stations.

9. A telecommunications system comprising:
a plurality of telecommunications network devices each having a radio interface and a layered protocol architecture for allowing transfer of upper
5 layer Protocol Data Units using a shared medium between communications units and the telecommunications network devices,

wherein said layered protocol architecture is operative for coding and transferring Protocol Data Units as a plurality of Radio Link Control data blocks each containing octets numbered from 1 to N2 and each carrying a plurality of Logical Link Control Protocol Data Units (LLC PDU) having user data or upper layers' signaling data and a data block header that includes a delimiter as a length indicator (LI) given in an octet, wherein any last Logical Link Control Protocol Data Unit of a Radio Link Control data block has no delimiter, and when a last Logical Link Control Protocol Data Unit fills the balance of a Radio Link Control data block, the length indicator is zero for a first length indicator in any next in sequence Radio Link Control data block.

10. A telecommunications system according to Claim 9, and further comprising at least one packet data physical channel through Protocol Data Units are transferred, wherein said layered protocol architecture further comprises a radio resource sublayer for managing the at least one packet data physical channel and managing Radio Link Control and Medium Access Control on the packet data physical channels.

11. A telecommunications system according to Claim 9, wherein said data block header includes a Final Block Indicator (FBI) field to indicate whether the Radio Link Control data block is the last data block of a Temporary Block Flow.

12. A telecommunications system according to Claim 11, wherein said Radio Link Control data block further comprises a downlink Radio Link Control data block.

13. A telecommunications system according to Claim 9, wherein said data block header includes an extension bit (E) field to indicate the presence of an optional octet in data block header.

14. A telecommunications system according to Claim 9, wherein said data block header includes a More bit (M) field to indicate when another Logical Link Control Protocol Data Unit follows the current one
5 within a Radio Link Control data block.

15. A telecommunications system according to Claim 9, wherein said communications units further comprise at least one mobile unit.

16. A telecommunications system according to Claim 9, wherein said telecommunications network devices further comprise a plurality of base stations.

17. A network device comprising:
a radio interface; and
a layered protocol architecture for allowing transfer of upper layer Protocol Data Units, wherein
5 said layered protocol architecture is operative for coding and transferring Protocol Data Units as a plurality of Radio Link Control data blocks that each carry at least one Logical Link Control Protocol Data Unit (LLC PDU) and a data block header that includes a
10 delimiter as a length indicator (LI), wherein any last Logical Link Control Protocol Data Unit of a Radio Link Control data block has no delimiter, and when a last Logical Link Control Protocol Data Unit fills the balance of a Radio Link Control data block, the length
15 indicator is zero for a first length indicator in any next in sequence Radio Link Control data block.

18. A network device according to Claim 17,
and further comprising at least one packet data
physical channel through which Protocol Data Units are
transferred, wherein said layered protocol architecture
5 further comprises a radio resource sublayer for
managing the at least one packet data physical channel
and managing Radio Link Control and Medium Access
Control on the packet data physical channel.

19. A network device according to Claim 17,
wherein said data block header includes a Final Block
Indicator (FBI) field indicative of whether the Radio
Link Control data block is the last data block of a
5 Temporary Block Flow.

20. A network device according to Claim 19,
wherein said Radio Link Control data block further
comprises a downlink Radio Link Control data block.

21. A network device according to Claim 17,
wherein the data block header includes an extension bit
(E) field to indicate the presence of an optional octet
in data block header.

22. A network device according to Claim 17,
wherein said data block header includes a More bit (M)
field to indicate when another Logical Link Control
Protocol Data Unit follows the current one within a
5 Radio Link Control data block.

23. A network device according to Claim 17,
wherein said communications units further comprise at
least one mobile unit.

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24. A network device according to Claim 17, wherein said telecommunications network devices further comprise a plurality of base stations.

25. A Radio Link Control data block comprising:

a plurality of Logical Link Control Protocol Data Units (LLC PDU) and a data block header that
5 includes a delimiter as a length indicator (LI), wherein any last Logical Link Control Protocol Data Unit of the Radio Link Control data block has no delimiter and when a last Logical Link Control Protocol Data Unit fills the balance of the Radio Link Control
10 data block, the length indicator is zero for a first length indicator in any next in sequence Radio Link Control data block.

26. A Radio Link Control data block according to Claim 25, wherein said data block header includes a Final Block Indicator (FBI) field to indicate whether the Radio Link Control data block is
5 the last data block of a Temporary Block Flow.

27. A Radio Link Control data block according to Claim 26, wherein said Radio Link Control data block further comprises a downlink Radio Link Control data block.

28. A Radio Link Control data block according to Claim 25, wherein data block header includes an extension bit (E) field to indicate the presence of an optional octet in data block header.

29. A Radio Link Control data block according to Claim 25, wherein said data block header includes a More bit (M) field to indicate when another Logical Link Control Protocol Data Unit follows the
5 current one within a Radio Link Control data block.

30. A method of delimiting Logical Link Control Protocol Data Units carried within Radio Link Control data blocks comprising the steps of providing no delimiter within any last Logical Link Control
5 Protocol Data Unit and providing a zero value for the length indicator in any next sequence Radio Link Control data block when a last Logical Link Control Protocol Data Unit fills the balance of the Radio Link Control data block.

31. A telecommunications system comprising:
a telecommunications network device having an interface and layered protocol architecture with at least an upper layer and lower layer;
5 a plurality of upper layer Protocol Data Unites delimited into a lower layer protocol payload, wherein said layered protocol architecture is operative for coding and transferring Protocol Data Units (PDU) as plurality of data blocks that each carry
10 at least one Protocol Data Unit and a data block header that includes a delimiter as a length indicator (LI), wherein any last Protocol Data Unit of a data block has no delimiter and when a last Protocol Data Unit fills the balance of the data block, the Length Indicator is
15 zero having no data for a first length Indicator in any next in sequence data block.

32. A telecommunications system according to claim 31 where said interface of said telecommunications network device comprises a radio interface.

33. A telecommunications system according to claim 32 wherein said telecommunications network device comprises a base station.

34. A telecommunications system according to claim 32 wherein said communications unit further comprises at least one mobile unit.

35. A telecommunications system according to claim 31 and further comprising at least one packet data physical channel through which Protocol Data Units are transferred.

36. A telecommunications system according to claim 31 wherein said upper and lower layer are contiguous within the layered architecture.

37. A telecommunications network device comprising:

an interface;

5 a layered protocol architecture with at least an upper layer and lower layer; and

a plurality of upper layer Protocol Data Units delimited into a lower layer protocol payload, wherein said layered protocol architecture is operative for coding and transferring Protocol Data

10 Units as a plurality of data blocks that each carry at least one Protocol Data Unit, and a data block header that includes a delimiter as a length indicator (LI), wherein any last Protocol Data of a data block has no

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delimiter and when a last Protocol Data Unit fills the balance of the data block, the Length Indicator is zero having no data for a first Length Indicator in any next in sequence data block.

38. A telecommunications network device according to claim 37 wherein said interface of said telecommunications network device comprises a radio interface.

39. A telecommunications network device according to claim 38 wherein said telecommunications network device comprises a base station.

40. A telecommunications network device according to claim 38 wherein said communications unit further comprises at least one mobile unit.

41. A telecommunications network device according to claim 37 and further comprising at least one packet data physical channel through which Protocol Data Units are transferred.

42. A telecommunications network device according to claim 37 wherein said upper and lower layer are contiguous within the layered architecture.

43. A data block for packet communications within a layered architecture having upper and lower layers comprising:

5 a plurality of Protocol Data Units and a data block header that includes a delimiter as a Length Indicator (LI), wherein any last Protocol Data Unit of the data block has no delimiter and when a last Protocol Data Unit fills the balance of the data block,

the length indicator is zero having no data for a first length indicator in any next sequence data block.

44. A data block according to claim 43 wherein said upper and lower layer are contiguous within the layered architecture.

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